

Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

HOMEMAKERS' CHAT

WEDNESDAY, March 8, 1939.

(FOR BROADCAST USE ONLY)

Subject: "EGG WHITE SECRETS." Information from the Bureau of Home Economics, U.S. Department of Agriculture.

--oo00oo--

You may have been cooking ever since you were "big enough to see over the stove," yet not know all the secrets of using egg whites to best advantage. For a good many facts about egg white have come to light only during recent research by food scientists.

Now for example, you may not have realized that temperature has much to do with how an egg separates and how the white whips. If the raw egg is cold -- just out of the refrigerator, you can separate the white from the yolk most easily. But if you want to whip the white, let the egg stand on the kitchen table awhile to take the chill off. You see, egg whites whip most easily when they are "room temperature" rather than very cold.

The time of whipping is another secret. You want to whip until the whites are stiff but not dry -- until they are snow-white yet still glossy and elastic. You see, if they are to hold their air bubbles while you fold them in a cake mixture and later during heating, they must not be stretched too thin by overbeating. Foods scientists at the Bureau of Home Economics found that exactly a minute and a half of beating with a mechanical beater gave foam of the best texture, volume, and stability. This may not be the time for your beater, but with just so much beating and no more, the bubbles are very small and white but still shiny, and the foam will hold its shape when you take the beater out. If you beat too much, the foam loses its shine and looks dry.

The beater also has considerable to do with the way an egg white whips. A beater with a thin blade or wire makes a fine foam. A heavy wire makes a coarse foam.

Then there's the question of hand-beating versus electric beating. You can get equally good results with wire whips, dover hand beaters, or electric beaters. But if you use an electric beater, have the speed moderate. You see, the egg white needs time to adjust itself to dividing and subdividing. Beating by hand is slow enough to allow this time and so is medium speed on an electric beater.

If even a small amount of fat gets into the white of egg, you can't beat it stiff. So be sure your beater is free of oil. And be sure no particles of yolk are left in, for yolk contains fat.

Both acid and salt help yolks to hold their stiffness. So adding cream of tartar or salt to egg whites gives the foam greater volume and stability. Put a pinch of salt or a bit of cream of tartar in before you start beating.

Sometimes beaten egg whites take on a pink color. The cause is probably that the plating has begun to wear off the blades of your beater. Many beaters are of copper plated with tin or other metal. When the plating wears off, the exposed copper may give the white a pink color. But this does no harm except that it changes the appearance.

Beside the beater, the bowl you use has much to do with efficient beating. The best shape bowl has a rounded bottom and gently sloping sides. This allows not only for efficient whipping but also for folding in sugar, flour and other ingredients. As to the size of the bowl, for one to 2 egg whites, use a 2-and-a-half or 3-cup bowl.

Some eggs have thin whites and others have thick whites. Department of Agriculture scientists have done considerable research on this subject. Of course, whites always become thin as the egg ages. But age is only part of the story. Some hens lay thin whites and others lay thick whites. It seems to be a matter of inheritance and has little to do with the season or what the hen eats or other factors of production. Thick whites stand up better, don't scatter so much in poaching, and are better for storing. Thin whites beat up to a larger volume quickly and easily, but they don't hold their volume so well. They shrink more in baking.

Now for a secret or two about combining egg whites with other ingredients. Most good cooks know that stiffly beaten whites should be folded gently into a mixture rather than stirred in. The idea is not to break the air bubbles and thus lose leavening.

In mixtures like meringues and angel cake, you get best results by sifting the dry ingredients into the egg whites. Sugar must actually dissolve in the water of the egg white. When you see an angel cake with brown flecks on the crust, or a meringue with golden droplets of sirup, you know that the sugar wasn't fully dissolved in the egg. The surest way to make sugar dissolve is to beat all or part of it in as you beat the egg white. In making angel cake, divide the sugar in half. Sift one half gradually over the egg white as you beat. Sift the other half several times with the flour, and then fold into the stiffly beaten egg white and sugar. Whipping part of the sugar into the egg white seems to prepare the egg for receiving the flour smoothly; sifting the rest of the sugar with the flour helps keep the flour from lumping. Of course, the finer the sugar, the more easily it dissolves. Fine granulated sugar and powdered sugar together is a good mixture to use in egg whites.

Finally, about cooking egg whites. Remember that too much heat or too long cooking always toughens them. What you want is just enough heat to expand the air beaten into the egg white, and then enough to set the whites so they will hold their light spongy shape when cold. So for meringues on pies and puddings, or for angel cake, a moderate oven of 325 to 350 degrees Fahrenheit is best. Heavy meringues containing a good deal of sugar need longer baking at less heat.

Well, these are a lot of little secrets, but they may bring you much success whenever you cook with egg whites.

